

TO: Property Owners, Contractors, and Design Professionals

FROM: Donovan Cushnie, Floodplain Coordinator

SUBJECT: Notice for Work on Existing Buildings in Flood Hazard Areas Substantial Improvement/Substantial Damage

The De Kalb County floodplain management regulations and codes specify that all new buildings to be constructed in areas adjacent to the future-conditions floodplain (regulated floodplains) are required to have their lowest floors elevated to or above the design flood elevation (DFE) that is the base flood elevation (BFE) plus three (3) feet for residential or plus one (1) foot for nonresidential, or one (1) foot above the future-conditions flood elevation, whichever is higher, unless the area is hydraulically independent. The regulations also specify that **substantial improvement** of existing buildings (remodeling, rehabilitation, improvement, or addition) or buildings that have sustained **substantial damage** must be brought into compliance with the requirements for new construction. **Please note that a building may be substantially damaged by any cause, including fire, flood, high wind, seismic activity, trees, land movement, or neglect.** It is important to note that all costs to repair a substantially damaged building to its pre-damage condition must be identified.

There are several aspects that must be addressed to achieve compliance with the floodplain management requirements. The requirements depend on several factors, including the flood zone at your property. The most significant compliance requirement is that the lowest floor, as defined in the regulations/code, must be elevated as stated. Please plan to meet with this department to review your proposed project, to go over the requirements, and to discuss how to bring your building into compliance.

Our regulations define these terms:

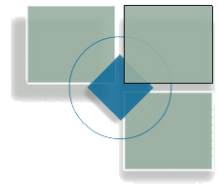
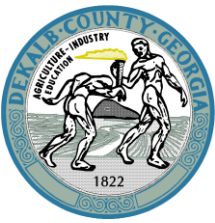
Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Substantial improvement means any combination of repairs, reconstruction, alteration, or improvements to a building, taking place during a ten-year period, in which the **cumulative cost** equals or exceeds fifty percent of the market value of the structure prior to the improvement. The market value of the building means:

- (1) The appraised value of the structure prior to the start of the initial repair or improvement, or
- (2) In the case of damage, the value of the structure prior to the damage occurring.

This term includes structures that have incurred "substantial damage" regardless of the actual amount of repair work performed. For the purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the building.

The term does not, however, include either:



- (1) Any project for improvement of a structure to correct existing violations of State or local health, sanitary, or safety code specifications that have been identified by the local code enforcement official and that are the minimum necessary to assure safe living conditions or
- (2) Any alteration of a "historic structure," provided that the alteration will not preclude the structure's continued designation as a "historic structure."

To make the substantial improvement determination or the substantial damage determination, we compare the cost of the proposed improvement or repairs to the market value of the building (excluding land, accessory structures, and landscaping). **If the resulting ratio equals or exceeds 50 percent, the existing building must be brought into compliance with the floodplain management requirements for new buildings.**

$$\frac{\text{Cost of Improvement or Cost to Repair to Pre-Damage Condition}}{\text{Market Value of Building}} \geq 50\%$$

Please note:

- You must provide a **detailed estimate of the cost** to perform the proposed improvements or repairs. If your building has been damaged, the cost estimate must include all work required to repair the building to its pre-damage condition. The cost estimate must include all labor and materials. If the work will be done by a contractor, the contractor's overhead and profit must be included. If the work will be done by the owner or volunteers, market rates must be used to estimate the cost of materials and the value of labor. Attached to this notice is a list of costs that must be included and costs that are excluded. After we review the cost estimate, we may require that it be broken down to show all materials and labor estimates.
- You must provide a market value appraisal of the building that is prepared by a professional appraiser according to standard practices of the profession. We will review the appraisal to determine that it accurately describes your building and does not include the value of the land, accessory buildings, and landscaping. Alternatively, we will use the tax assessment value of your building as the estimate of the market value of the building before the work is performed.

If you have any questions regarding this information, please contact Donovan Cushnie at dcushnie@dekalbcountyga.gov or 404 687-2414.

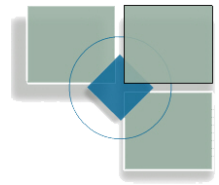
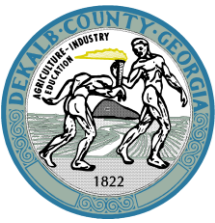
Attachments:

Requirements for Applications for Permits for Substantial Improvements and Repair of Substantial Damage

Costs for Substantial Improvements and Repair of Substantial Damage

Owner's Affidavit

Contractor's Affidavit

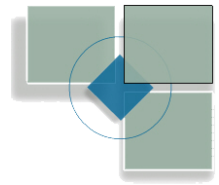
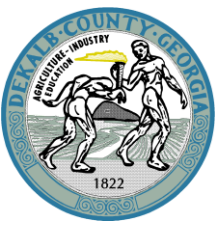


Requirements for Applications for Permits for Substantial Improvements and Repair of Substantial Damage

Please contact Donovan Cushnie dcushnie@dekalbcountyga.gov or 404 687-2414, if you have questions about the substantial improvement and substantial damage requirements. Your building may have to be brought into compliance with the floodplain management requirements for new construction.

Applications for permits to work on existing buildings that are located in areas adjacent to the future-conditions floodplain must include the following:

- Current photographs of the exterior (front, rear, sides)
- If your building has been damaged, include photographs of the interior and exterior; provide pre-damage photos of the exterior, if available
- **Detailed description** of the proposed improvement (rehabilitation, remodeling, addition, etc.) or repairs
- **Detailed** cost estimate of the proposed improvement or the cost estimate to repair the damaged building to its before-damage condition
- Elevation certificate or elevation survey
- You may submit a market value appraisal prepared by a licensed professional appraiser or we will use the tax assessment value of the building
- Owner's affidavit (signed and dated)
- Contractor's affidavit (signed and dated)

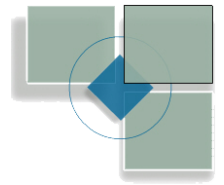
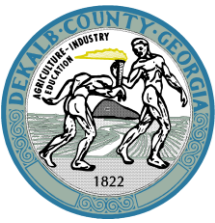


Costs for Substantial Improvements and Repair of Substantial Damage

Provide project costs details in a table or other similar format. Included Costs:

Items that must be included in the costs of improvement or costs to repair are those that are directly associated with the building. The following list of costs that must be included is not intended to be exhaustive, but characterizes the types of costs that must be included:

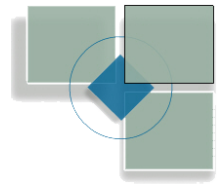
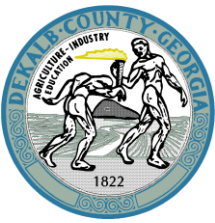
- Materials and labor, including the estimated value of donated or discounted materials and owner or volunteered labor
- Site preparation related to the improvement or repair (foundation excavation, filling in basements)
- Demolition and construction debris disposal
- Labor and other costs associated with demolishing, moving, or altering building components to accommodate improvements, additions, and making repairs
- Costs associated with complying with any other regulation or code requirement that is triggered by the work, including costs to comply with the requirements of the Americans with Disabilities Act (ADA)
- Costs associated with elevating a structure to an elevation that is lower than the BFE
- Construction management and supervision
- Contractor's overhead and profit
- Sales taxes on materials
- Structural elements and exterior finishes, including:
 - Foundations (e.g., spread or continuous foundation footings, perimeter walls, chainwalls, pilings, columns, posts, etc.)
 - Monolithic or other types of concrete slabs
 - Bearing walls, tie beams, trusses
 - Joists, beams, subflooring, framing, ceilings
 - Interior non-bearing walls
 - Exterior finishes (e.g., brick, stucco, siding, painting, and trim)
- Structural elements and exterior finishes (cont.):
 - Windows and exterior doors
 - Roofing, gutters, and downspouts
 - Hardware
 - Attached decks and porches
 - Interior finish elements, including:
 - Floor finishes (e.g., hardwood, ceramic, vinyl, linoleum, stone, and wall-to-wall carpet over subflooring)
 - Bathroom tiling and fixtures
 - Wall finishes (e.g., drywall, paint, stucco, plaster, paneling, and marble)
 - Built-in cabinets (e.g., kitchen, utility, entertainment, storage, and bathroom)
 - Interior doors
 - Interior finish carpentry
 - Built-in bookcases and furniture
 - Hardware
 - Insulation
- Utility and service equipment, including:
 - HVAC equipment
 - Plumbing fixtures and piping
 - Electrical wiring, outlets, and switches
 - Light fixtures and ceiling fans
 - Security systems
 - Built-in appliances
 - Central vacuum systems
 - Water filtration, conditioning, and re-circulation systems



Excluded Costs

Items that can be excluded are those that are not directly associated with the building. The following list characterizes the types of costs that may be excluded:

- Clean-up and trash removal
- Costs to temporarily stabilize a building so that it is safe to enter to evaluate required repairs
- Costs to obtain or prepare plans and specifications
- Land survey costs
- Permit fees and inspection fees
- Carpeting and recarpeting installed over finished flooring such as wood or tiling
- Outside improvements, including landscaping, irrigation, sidewalks, driveways, fences, yard lights, swimming pools, pool enclosures, and detached accessory structures (e.g., garages, sheds, and gazebos)
- Costs required for the minimum necessary work to correct existing violations of health, safety, and sanitary codes
- Plug-in appliances such as washing machines, dryers, and stoves



Owner's Affidavit: Substantial Improvement or Repair of Substantial Damage

Property Address: _____

Parcel ID Number: _____

Owner's Name: _____

Owner's Address/Phone: _____

Contractor: _____

Contractor's License Number: _____

Date of Contractor's Estimate: _____

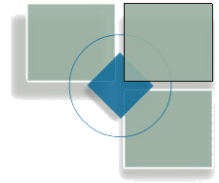
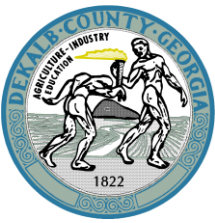
I hereby attest that the description included in the permit application for the work on the existing building that is located at the property identified above is all of the work that will be done, including all improvements, rehabilitation, remodeling, repairs, additions, and any other form of improvement. I further attest that I requested the above-identified contractor to prepare a cost estimate for all of the work, including the contractor's overhead and profit. I acknowledge that if, during the course of construction, I decide to add more work or to modify the work described, that DeKalb County will re-evaluate its comparison of the cost of work to the market value of the building to determine if the work is substantial improvement. Such re-evaluation may require revision of the permit and may subject the property to additional requirements.

I also understand that I am subject to enforcement action and/or fines if inspection of the property reveals that I have made or authorized repairs or improvements that were not included in the description of work and the cost estimate for that work that were the basis for issuance of a permit.

Owner's Signature: _____

Date: _____

Notarized: _____



Contractor's Affidavit: Substantial Improvement or Repair of Substantial Damage

Property Address: _____

Parcel ID Number: _____

Owner's Name: _____

Owner's Address/Phone: _____

Contractor: _____

Contractor's License Number: _____

Date of Contractor's Estimate: _____

I hereby attest that I have personally inspected the building located at the above-referenced address and discussed the nature and extent of the work requested by the owner, including all improvements, rehabilitation, remodeling, repairs, additions, and any other form of improvement.

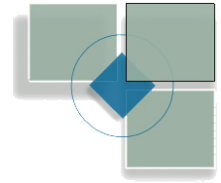
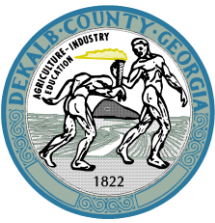
At the request of the owner, I have prepared a cost estimate for all of the improvement work requested by the owner and the cost estimate includes, at a minimum, the cost elements identified by the DeKalb County that are appropriate for the nature of the work. If the work is repair of damage, I have prepared a cost estimate to repair the building to its pre-damage condition. I acknowledge that if, during the course of construction, the owner requests more work or modification of the work described in the application, that a revised cost estimate must be provided to DeKalb County, which will re-evaluate its comparison of the cost of work to the market value of the building to determine if the work is substantial improvement. Such re-evaluation may require revision of the permit and may subject the property to additional requirements.

I also understand that I am subject to enforcement action and/or fines if inspection of the property reveals that I have made or authorized repairs or improvements that were not included in the description of work and the cost estimate for that work that were the basis for issuance of a permit.

Contractor's Signature: _____

Date: _____

Notarized: _____



Substantial Improvement Worksheet for Floodplain Construction

(for reconstruction, rehabilitation, addition, or other improvements, and repair of damage from any cause)

Property Owner: _____
Address: _____
Permit No.: _____
Location: _____
Description of improvements: _____

| | |
|--|---------|
| Present Market Value of structure ONLY (market appraisal or adjusted assessed value, BEFORE improvement, or if damaged, before the damage occurred), not including land value: | \$ |
| Cost of Improvement - Actual cost of the construction** (see items to include/exclude) **Include volunteer labor and donated supplies.** <u>Provide a detailed list.</u> | \$ |
| Cost of Previous Improvements: Request from owner or DeKalb County | \$ |
| Ratio= Cost of All Improvements (or Cost to Repair) X $\frac{100}{\text{Market Value}}$ | _____ % |

If ratio is 50 percent or greater (**Substantial Improvement**), entire structure including the existing building must be elevated to the design flood elevation (DFE) that is the base flood elevation (BFE) plus 3 ft –residential, or plus 1 ft – nonresidential, and all other aspects brought into compliance. Provide project cost details with a detailed description.

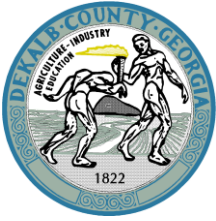
Important Notes:

1. Review cost estimates to ensure that all appropriate costs are included or excluded.
2. If a residential pre-FIRM building is determined to be substantially improved, it must be elevated to or above the DFE. If a non-residential pre-FIRM building is substantially improved, it must be elevated or dry flood-proofed to the DFE.
3. Proposals to repair damage from any cause must be analyzed using the formula shown above.
4. Any proposed improvements or repairs to a post-FIRM building must be evaluated to ensure that the improvements or repairs comply with floodplain management regulations and to ensure that the improvements or repairs do not alter any aspect of the building that would make it non-compliant.
5. Alterations to and repairs of designated historic structures may be granted a variance or be exempt under the substantial improvement definition) provided the work will not preclude continued designation as a "historic structure."
6. Any costs associated with directly correcting health, sanitary, and safety code violations may be excluded from the cost of improvement. The violation must have been officially cited prior to submission of the permit application.

Pre-FIRM in DeKalb County for NFIP is before May 15, 1980.

Determination completed by: _____

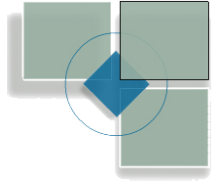
Date: _____



DeKalb County Planning & Sustainability Department

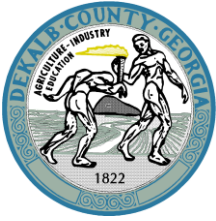
Michael L. Thurmond
Chief Executive Officer

Andrew A. Baker AICP
Director



Site Plan Requirements in Flood Hazard Areas

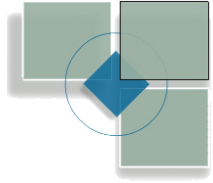
- (1) Site plan, including but not limited to:
 - a. For all proposed structures, **spot ground elevations at building corners** and twenty-foot or smaller intervals along the foundation footprints, or one-foot contour elevations throughout the building site referenced to mean sea level NAVD 1988; and
 - b. Proposed locations of water supply, sanitary sewer, utilities, and stream buffers; and
 - c. If available, the base and future-conditions flood elevation from the flood insurance study and/or flood insurance rate map **to the nearest tenth of a foot**, 0.1 ft **M.S.L.**; and
 - d. If applicable, the location of the regulatory floodway; and
 - e. Existing and proposed elevation of the area in question and the nature, location and dimensions of existing and/or proposed structures, earthen fill placement, amount and location of excavation material and storage of materials or equipment; and
 - f. Proposed locations of drainage and stormwater management facilities; and
 - g. Proposed grading plan. **Cut areas shall be stabilized and graded to a slope of no less than 2.0 percent**; and
 - h. Boundaries of the base flood floodplain and future-conditions floodplain, **plus 5-foot easement**; and
 - i. Certification of the site plan by a registered professional engineer in the state.
 - j. Note on the plan in bold text: **Flood damage-resistant materials, to include fasteners, are to be used below the base flood elevation per ASCE 24 and the International Codes.**
 - k. Any addition of volume in the floodplain requires compensatory grading up to 150 cubic yards per acre of floodplain on the property or fraction thereof.
- (2) Building and foundation design detail, including but not limited to:
 - a. Proposed elevation in relation to mean sea level, or highest adjacent grade, of the lowest floor, including the basement, of all structures and the **minimum finished floor elevation, MFFE, (base flood elevation plus three feet for residential)** or base flood plus one foot for non-residential; and
 - b. For a crawl space foundation, location and total net area of foundation openings as required in subsection [14-432\(b\)\(3\)](#) and FEMA Technical Bulletins 1-93 and 7-93; and
 - c. For foundations placed on fill, the location and height of fill, and compaction requirements (compacted to ninety-five (95) percent using the Standard Proctor Test Method); and
 - d. Certification that any proposed nonresidential floodproofed structure meets the criteria in [14-432](#); and
 - e. For enclosures below the base flood elevation, location and total net area of foundation openings as required in [14-432c\(i\)](#).
 - f. Certification that the foundation design detail is by a registered professional engineer in the state.
 - g. Note on the plan in bold text: **Flood damage-resistant materials, to include fasteners, are to be used below the base flood elevation per ASCE 24 and the International Codes.**



DeKalb County Planning & Sustainability Department

Michael L. Thurmond
Chief Executive Officer

Andrew A. Baker AICP
Director



Reference 14-420.(a)(1), and (2), 14-424 to 14-430, and through 14-450.

All heating and air conditioning equipment and components (including ductwork), all electrical, ventilation, plumbing and other service facilities shall be designed and/or located three (3) feet above the base flood elevation or one (1) foot above the future-conditions flood elevation, whichever is higher, so as to prevent water from entering or accumulating within the components during conditions of flooding; and

Within zones AH or AO if no flood depth number is specified, the lowest floor, including basement, shall be elevated at least three (3) feet above the highest adjacent grade, and grade so that there are adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures. Provide openings for elevated buildings if it applies.

For additions include current photographs of the exterior (front, rear, sides), detailed description of the proposed improvement (rehabilitation, remodeling, addition, etc.) or repairs, cost estimate of the proposed improvement or the cost estimate to repair the damaged building to its before-damage condition, Owner's affidavit (signed and dated), Contractor's affidavit (signed and dated), and the Substantial Improvement Worksheet.

Substantial improvement means any combination of repairs, reconstruction, alteration, or improvements to a building, taking place during a ten-year period, in which the cumulative cost equals or exceeds fifty percent of the market value of the structure prior to the improvement.

For substantial improvement construction means the alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building, as well as the following:

- Additions to the principal structure
- Conversion of a carport to enclosed habitable space
- Enclosure of a deck, or conversion of a deck to sunroom or similar.

In assessing a repairs, reconstruction, alteration, or improvements permit application for an existing dwelling in a flood-prone area a substantial improvement determination is required necessitating a recent property appraisal provided by the owner that must include 'Cost Approach to Valuation' to document the value of each structure separate from that of the land. Alternately the owner may elect to use the Tax Assessors appraised value of the structure as the basis of the pre-construction cost.

If the substantial improvement determination finds that the proposed work is substantial improvement the options are:

1. The entire structure must be brought into compliance with the codes, or
2. The scope of work can be reduced to below the amount that would result in substantial improvement determination.

Contact Donovan Cushnie at dcushnie@dekalbcountyga.gov for additional information.